

**RESPONSE TO COMMENTS FROM THE
U.S. ENVIRONMENTAL PROTECTION AGENCY
ON THE DRAFT LETTER WORK PLAN FOR GROUND-WATER
AND SOIL INVESTIGATION AT SITE 7
NAVAL AIR STATION, BRUNSWICK, MAINE**

COMMENTOR: Michael S. Barry

Dated: 27 October 2000

GENERAL RESPONSE TO COMMENTS

Work has commenced at Site 7, as per the Draft Work Plan. During December 2000, Phase 1, the short duration pumping test was completed (as discussed with the RAB during a technical meeting conference call on 3 January, 2001). The remaining work at Site 7 is scheduled to be completed during Spring 2001 when weather allows for intrusive activities.

SPECIFIC COMMENTS

1. Unrestricted discharge to sanitary sewer shouldn't be a problem for this site, but should only be conducted if the Brunswick Sewer District's cadmium discharge concentration limit (if any) is reasonably above the highest cadmium concentration expected (EPA understands this to be in the range of 10-20 ppb). Please verify what the cadmium discharge limit is. If the discharge limit is near the current cadmium concentration, containers may be required by prudent engineering practice. As a reference, pumping at 5 gpm for the duration cited in the work plan will produce about three standard size tank wagons of water (approx 15,000 gallons total).

Response—The pumping test has been completed, and water discharge was successfully coordinated with the Brunswick Sewer District.

2. Regarding the pumping tests.
 - a. EPA expects some degree of rebound after the pumping test as cadmium desorbs from soil into the now "cleaner" fresh groundwater so as to achieve equilibrium. The rebound rate will be dependent upon actual conditions, but will likely occur over several months to years, not days or weeks. Thus consideration should be given to "surging" the pumping or performing several cycles to better determine rebounding rate and magnitude. We concur that an assessment should be made after the pumping test.

Response—Preliminary sampling results from ground-water samples collected during the pumping test indicated a relatively stable cadmium concentration of approximately 50 µg/L during the test, and after the test was completed. The reasons for the continuing cadmium source will be investigated during upcoming phases of work, as outlined in the Site 7 Work Plan.

- b. Regardless of the results of the pumping test, EPA strongly supports the envisioned excavation due to uncertainty about rebound rate and magnitude. We are concerned that without an excavation, the situation could be the same a year from now. We assume project personnel will solicit NORTHDIV/MEDEP/EPA RPM input, as in the past.

Response—The RAB will be kept informed as to progress of additional work at Site 7 through monthly conference calls and technical meetings.

3. EPA doesn't have any experience with naturally occurring cadmium in Region 1, though it's possible that local geochemical conditions facilitate the mobilization of the cadmium present. Another explanation is that the numerous test pits merely missed a small area with higher cadmium contaminations that are responsible for the groundwater contamination. The fact that the highest detected cadmium in soil was only 8 ppm (test pit 12), which was lower than the calculated concentration required to cause groundwater concentrations in the range of 10-15 ppb at MW-94 & 229 supports this.

Response—While the reason for the cadmium concentrations in ground water is unknown at this time, we are hopeful that the planned excavations and soil screening with potential offsite disposal of impacted soil will resolve this issue.

4. Even though it's sensitivity for cadmium in soil is 10 ppm, use of an XRF scanner is a great idea that we strongly support. It will be useful if the test pits missed the highest cadmium concentrations in soil.

Response—The Navy appreciates the EPA's support for use of this field screening method.

5. EPA concurs with the soil disposal plan.
 - a. The Maine Residential Guideline of 27 ppm cadmium in soil is the appropriate cleanup standard as it is more restrictive than federal standards. EPA Region 1 uses the Region 9 PRG's which for cadmium in soil are 1400 ppm for cancer risk and 37 ppm for a hazard quotient of 1.0. Though they won't be used, please cite the federal standards in the final work plan.

Response—The federal standard of 37 mg/kg for cadmium in soil will be added as an additional bullet to Page 5 of the Final Work Plan, as shown below:

Note that the federal standard for cadmium in soil is 1,400 mg/kg (EPA Region IX Preliminary Remediation Goals), or 37 mg/kg for cancer risk. The MEDEP standard is more stringent and, therefore, will be used as the soil screening value.

- b. Though soils of less than 27 ppm cadmium could be disposed of onsite, we strongly concur that they be disposed somewhere else on NASB because they could be a source of groundwater contamination at site 7. Such disposal wouldn't have any restrictions due to cadmium

Response—The Navy agrees with this comment. If soil was to be excavated which could be placed without restriction, it is most likely the soil would be re-used elsewhere.